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(54) 1-BUTENE RANDOM COPOLYMER AND USE  
THEREOF

(57) Abstract:

PURPOSE: To provide the titled copolymer composed of 1-butene and an  $\alpha$ -olefin, having narrow molecular weight distribution and compositional distribution, specific viscosity, melting point, crystallinity, solubility and NMR spectrum and excellent transparency and tensile characteristics and useful as a packaging film, etc.

CONSTITUTION: 1-Butene and a 3W20C  $\alpha$ -olefin other than 1-butene are copolymerized in the presence of a catalyst composed of an indenyl group-containing zirconium compound and alumino-oxane to obtain the objective copolymer composed of 60W98mol% 1-

butene component and 2W40mol%  $\alpha$ -olefin component, having an intrinsic viscosity  $[\eta]$  of 0.5W6dl/g measured in decalin at 135°C, a molecular weight distribution ( $M_w/M_n$ ) of  $\leq 3$ , a melting point of 40W130°C measured by differential scanning calorimeter and a crystallinity of 5W60% measured by X-ray diffraction, containing  $\leq 1$ wt% component soluble in boiling methyl acetate and  $\leq 4 \times [\eta]^{1.2}$ wt% component soluble in acetone/n- decane mixture (1/1 by volume) at 10°C, free from the signal of two adjacent methylene chains between two adjacent tert-carbon atoms in the main chain measured by  $^{13}\text{C}$ -NMR spectrum and having a standard deviation of compositional distribution of  $\leq 10$ mol%.

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